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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/598,790	09/12/2006	Sangmin Yun	Q96951	1423
<div>23373 7590 01/30/2008</div> <div>SUGHRUE MION, PLLC</div> <div>2100 PENNSYLVANIA AVENUE, N.W.</div> <div>SUITE 800</div> <div>WASHINGTON, DC 20037</div>				
			<div>EXAMINER</div> <div>GALLIS, DAVID E</div>	
			<div>ART UNIT</div> <div>1625</div>	<div>PAPER NUMBER</div>
			<div>MAIL DATE</div> <div>01/30/2008</div>	<div>DELIVERY MODE</div> <div>PAPER</div>

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/598,790	YUN ET AL.	
	Examiner	Art Unit	
	David E. Gallis	1625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 11-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 15 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/12/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1 through 15 are pending. Claims 11 through 14 have been withdrawn from consideration. Applicant's claim to benefit of foreign priority of KOREA 10-2004-0016714 filed March 12, 2004 is acknowledged.

Election/Restrictions

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:
- I. Claims 1 through 10, and 15 drawn to a method for preparing a thieno[3,2-c]pyridine derivative of formula (1) comprising reacting a compound of formula (2e) with a compound of formula (3) or its salt, and a compound of formula (2e) as an intermediate for the preparation of a thieno[3,2-c]pyridine derivative of formula (1) according to claim 1, classified in class 546 and subclass 114.
 - II. Claim 11 drawn to a compound of formula (2a) as an intermediate for the preparation of a thieno[3,2-c]pyridine derivative of formula (1) according to claim 1, classified in class 549 and subclass 71.
 - III. Claims 12 and 13 drawn to compounds of formulas (2b) and (2c) as intermediates for the preparation of a thieno[3,2-c]pyridine derivative of formula (1) according to claim 1, classified in class 549 and subclass 78.
 - IV. Claim 14 drawn to a compound of formula (2d) as an intermediate for the preparation of a thieno[3,2-c]pyridine derivative of formula (1) according to claim 1, classified in class 549 and subclass 32.

3. The inventions listed as Groups I through IV do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Each of Groups II through IV comprise intermediate compounds containing significantly different structures than that of compound (2e) of the independent claim 1. These different structures result in different class and/or subclass designations. This clearly denotes a lack of general inventive concept common to all Groups.

Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

Accordingly, Groups I through IV are not linked by the same or a corresponding special technical feature as to form a general inventive concept.

4. This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

5. The species lack unity because they differ in elements, bonding arrangements and chemical structure to such an extent that a reference anticipating any one group would not render the other group obvious, thus unpatentability of any group would not necessarily imply unpatentability of another group. The varying classes and subclasses of each diverse structure as delineated will constitute an enormous search burden.

The election of an invention or may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

6. Invention Group I was elected without traverse by Applicants' representative, Ms. Sunhee Lee, by telephone on the morning of January 22, 2008. The examiner has withdrawn non-elected claims 11 through 14. This restriction is hereby MADE FINAL.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

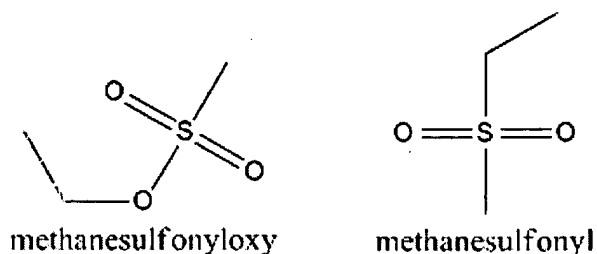
8. Claim 1 through 10, and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. Claims 1 and 15 recite X' and Y' substituent options of "methanesulfonyl" and "p-toluenesulfonyl". This nomenclature is inconsistent with the disclosed process for the preparation of a compound of formula (2e)(see page 5, Reaction Scheme 2, and page

18, Examples 12 and 13). As disclosed, the X and Y substituents comprise OMs and OTs groups which are "methanesulfonyloxy" and "p-toluenesulfonyloxy" respectively.

The structures below illustrate the differences in structures disclosed and claimed.

Appropriate correction is required.

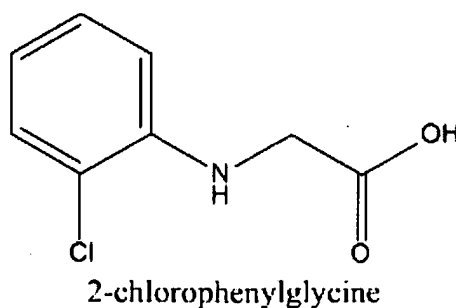
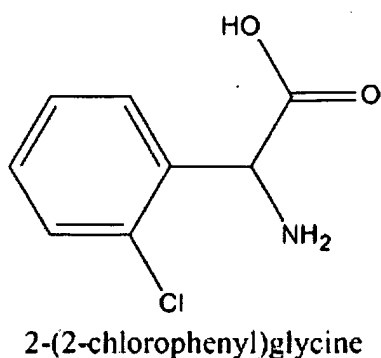


Claims 2 through 10 are rejected based in their dependency on rejected claim 1.

10. Claim 10 recites the temperature range limitation "of the solvent used" in claim 1. There is insufficient antecedent basis for this limitation in the claim. Claim 1 recites no requirement for solvent to be used in the process. Correction is required.

Claim Objections

11. Claim 4 objected to because of the following informalities: Claim 4 recites a species of formula (3) as "(S)-(+)-2-chlorophenylglycin(e)". This is nomenclature does not describe Applicants' intended formula (3) species. The acceptable naming convention is "(S)-(+)-2-(2-chlorophenyl)glycine" (see structures below). This incorrect convention is also found in Examples 25 and 32 of the specification. Appropriate correction is required.



Application/Control Number:
10/598,790
Art Unit: 1625

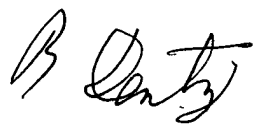
Page 6

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David E. Gallis whose telephone number is 571-272-9068. The examiner can normally be reached on Mon-Thur 8:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Andres can be reached on 571-272-1600. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

David E. Gallis
Patent Examiner


BERNARD DEITZ
PRIMARY EXAMINER